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1919 M Street, N.W. - Room 222
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January 7, 1993

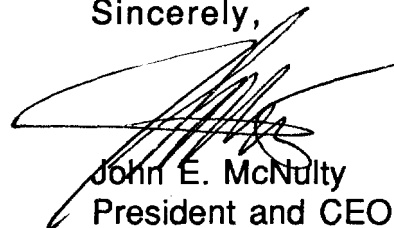
RE: Reply Comments of Rose Communications, Inc. Gen. Docket
No. 90-314, ET Docket No. 92-100

Dear Madam Secretary:

Transmitted herewith are an original and four copies of Rose's
reply comments in the above referenced proceeding.

If you have any questions with regard to this matter, please do
not hesitate to contact me.

Sincerely,



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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)	
)	GEN Docket No. 90-314
Amendment of the Commission's)	ET Docket No. 92-100
Rules to Establish New Personal)	
Communications Services)	

REPLY COMMENTS OF ROSE COMMUNICATIONS, INC

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I. INTRODUCTION

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Rose Communications, Inc. ("Rose") respectfully submits its reply comments in the above captioned proceeding on Personal Communications Services (PCS).

Rose is a wireless engineering and development technology company with its primary focus on the unlicensed voice and low speed data product market. Rose's first product is the Microcel 2400 Wireless Business Phone System. This system operates under the FCC's Part 15 rules that permit low-powered devices to operate on an unlicensed basis.

Rose is one of the first technology companies to capitalize on the technical flexibility and benefits inherent in the existing Part 15 rules. Moreover, Rose is one of the few companies in the industry with actual technology development and product marketing experience in Part 15 office telephony applications operating at 2.4 GHz. This experience in designing, developing, producing and marketing a wireless office phone system in the 2.4 GHz band under existing Part 15 rules is particularly applicable to the instant situation of determining the appropriate rules to govern the 2 GHz unlicensed bands in the PCS proceeding.

In this respect, Rose will confine its reply comments to the three most important issues confronting unlicensed wireless PCS equipment manufacturers: the amount of spectrum allocated, the potential to merge high-speed data and voice in the same band and the need to unbundle the unlicensed sector from the licensed sector to permit rapid delivery of unlicensed products to the consumer.

II. DISCUSSION

A. THE SPECTRUM ALLOCATION PROPOSED IN THE NPRM FOR UNLICENSED OPERATION IS INSUFFICIENT.

The Commission proposed to allocate 20 MHz of spectrum for unlicensed operation by PCS devices. This proposed allocation is

simply not large enough to satisfy the enormous demand for voice-based wireless office systems that will dominate this band. The considerable demand for the voice-based services in the office environment was well documented by several companies in the comments. In its comments in this proceeding Rose, in fact, identified several of the leading studies which discussed the demand, especially for voice services.¹

Likewise, the need for at least 40 MHz for these voice-based systems has been well documented elsewhere. In our original comments we cited the study conducted by Hatfield and Associates which concluded that "We believe at least 40 MHz of spectrum should initially be allocated for use by WPBX systems."² The analysis was based on advanced spectrum efficient technology and reuse factor assumptions which exceed current technology. As such, the study conclusions relating to the spectrum needs for voice-based office systems are very conservative. Further, the study did not take into account the spectrum needs of high-speed data services.

¹ See Rose's comments in GEN Docket No. 90-314, ET Docket No. 92-100, at 3, 4 and 5.

² Personal Communications Service and Private Wireless PBX PCS Systems, Hatfield and Associates, Inc. June 20, 1991 at p. 23

An overwhelming majority of those commentators who intend to participate in the unlicensed marketplace, supported the view that the initial proposal of 20 MHz for unlicensed service was inadequate. Pre-eminent among those commentators was the Wireless Information Networks Forum (WinForum) which is an alliance of the leading technology companies who are working together to bring wireless unlicensed services to the American public. The WinForum said "There is an immediate need for an initial allocation of at least 40-65 MHz in the 2 GHz band for such [unlicensed PCS] services."³

Similarly, these views were echoed by non-members of the WinForum. For example, Interdigital Communications Corporation stated that "The proposed allocation of 20 MHz [for unlicensed PCS] is simply not large enough to ensure the high level of service quality or to accommodate the demand for wireless office systems."⁴

³ Comments of WinForum, at 5.

⁴ Comments of Interdigital, at 10

Consensus clearly favors an increased spectrum allocation for unlicensed PCS. The demand for unlicensed voice-based wireless office systems substantiates the need for a large share of the initial allocation of spectrum be assigned for wireless telephony office systems (WTOS). Likewise, the projected demand for high-speed data systems underscores the need for adequate and discrete spectrum for the data segment of the marketplace.

Without an adequate allocation, equipment manufacturers -- voice and data -- will be driven to expensive technical solutions to attempt to co-exist in a limited amount of spectrum. This front-end expense will trickle-down to the marketplace in the form of higher costs to the end-users resulting in a smaller overall demand for the wireless services.

B. THE COMMISSION SHOULD SEPARATE VOICE (AND VOICE BAND DATA) AND HIGH-SPEED DATA INTO SEPARATE SUB-BANDS

As noted above, voice and data systems sharing the same band will impose costs irrespective of the final amount of spectrum allocated. The two services are dissimilar and the underlying technologies are disparate. As we noted in our comments, asynchronous data networking is a bursty type of service that does not require a real time connection. Voice (and low speed data) on the other hand is continuous and periodic once the connection is established. Further the period of the connection is unknown and potentially exists for long periods of time. These two services should not be handicapped by the added equipment

cost required to co-exist in the same spectrum.

This was the same conclusion reached by Dr. David Nagel, Senior Vice President, Advanced Technology Group of Apple Computer during the FCC's En Banc hearing last December. Apple is one of the founding members of the WINFORUM and a pioneer in the development of the Data-PCS concept.

We agree with Apple and request the Commission to separate the two services into separate sub-bands. Requiring voice and high-speed data applications to co-exist on the same spectrum will exact technical and cost penalties which will adversely impact the market for voice-based [and high-speed data] unlicensed PCS.

**C. THE COMMISSION SHOULD UNBUNDLE REGULATORY CONSIDERATION
OF THE UNLICENSED PCS FROM THE LICENSED PCS.**

A close reading of the comments in this proceeding shows a wide diversity of views concerning the difficult issues of license eligibility and the licensing mechanism. These issues are overlaid with a series of federal and state regulatory considerations concerning interconnection, local loop and cellular competition. These are serious concerns which will require careful deliberations. The deliberations will be contentious and protracted. Moreover, these issues are not relevant to unlicensed service and should not be allowed to delay

the delivery of unlicensed PCS to the marketplace.

The economic cost of delay has been previously identified by several commentors in this proceeding. In addition, during the discussion leading to the adoption of this notice, several Commissioners noted the economic cost of delay. Along this same line, a majority of the commentors asked the Commission to expedite the process.

We are now in the fourth year of regulatory consideration of PCS. If unlicensed and licensed PCS issues remained bonded together the resulting delay will adversely impact equipment manufacturers ready to commit significant capital to this marketplace and will have a major impact on the U.S. economy.

Separating the unlicensed from the licensed PCS will allow wireless services to reach consumers expeditiously. Accordingly, the Commission should separate the unlicensed from the licensed PCS and move directly to a final order for unlicensed PCS.

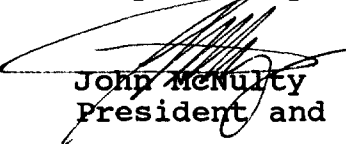
III. CONCLUSION

Rose strongly urges the Commission to respond to the overwhelming consensus for additional spectrum for unlicensed PCS and to allocate a minimum of 40 MHz for that service. Further, Rose recommends the Commission recognize the inherent conflict in sharing spectrum between two disparate technologies and permit

voice and data services to develop quickly and efficiently in discrete spectrum.

Finally, The wide-ranging scope of the licensed PCS issues assure regulatory delay. The minor scale of the unlicensed PCS issues are by contrast easily resolved. Rose suggests that the Commission separate the unlicensed PCS allocation and enabling rules from the allocation and rules for licensed PCS and permit unlicensed PCS service to reach the end users expeditiously.

Respectfully submitted,



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January 7, 1993



CERTIFICATE OF SERVICE

I, Carla Gorczewski, hereby certify that copies of the foregoing reply comments in Gen. Docket No. 90-314 were mailed first-class, postage prepaid, to the following on the 8th day of January 1993.

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